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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/517,566	12/09/2004	Michael Rodenberg	Sartorius-11	2649
1218	7590	01/09/2007		
CASELLA & HESPOS 274 MADISON AVENUE NEW YORK, NY 10016			EXAMINER MENON, KRISHNAN S	
			ART UNIT	PAPER NUMBER
			1723	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/09/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/517,566

Applicant(s)

RODENBERG ET AL.

Examiner

Krishnan S. Menon

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims 1-20 are pending after the preliminary amendment of 12/9/04

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Denk et al (WO 95/20038; US equivalent: US 6,692,786 used for the rejection) in view of Strohm et al (US 6,139,724).

Applicant's claims are for a process of filtering beverages, particularly, beer, using cross-flow filters, the process comprising periodic back-flushing of the filters using the filtrate itself, and also periodically cleaning the filters using cleaning agents between longer intervals when the filtrate flow goes below certain pre-set values. Rest of the claims recite frequency and period of cleaning cycles, the operating pressures, temperatures, the micron-sizes of filter ratings, etc.

Applicant's process (claim 1) also recites rinsing the membrane with "degassed water" after the chemical cleaning.

Denk teaches a process of filtering beer with an identical system as that of the applicant (compare figure 1 of Denk with applicant's figure 2), having periodic backflushing with filtrate and chemical cleaning with caustic soda – see column 6 line 11

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– column 7 line 43 and column 3 line 23 – column 4 line 31. Figures 3-6 show the details of the cleaning cycles. The filters have pore sizes from 0.2-1 μm –see column 9 lines 1-5. Denk also teaches CO₂ for emptying out the filter/filter system – column 7 lines 25-43.

Denk does not have all the details of the chemical cleaning cycle as claimed. However, such details are optimizable to maintain the flow rates and pressure drops as taught by Denk.

Strohm also teaches beer filtration using microfilters and cleaning the filters periodically with chemicals such as NaOH or KOH – see figures and column 3 line 50 – column 4 line 21 with details of flushing the system with water before and after the caustic cleaning, and then flushing the water out with CO₂ before filling with beer. It would be obvious to one of ordinary skill in the art at the time of invention to use the teaching of Strohm in the teaching of Denk because Strohm gives more details of the chemical cleaning, and also teaches using CO₂ to flush the system and keep the system oxygen/air free –see Strohm column 3 lines 57-61.

The references do not teach using “degassed water” for rinsing after the chemical cleaning step. However, Strohm teaches that the water is removed using CO₂ before filling with beer. Applicant’s purpose of using “degassed water” is to eliminate the possibility of oxygen contamination of the system. Using the CO₂ flush would also accomplish the same thing, and is therefore considered as an obvious equivalent, unless applicant can show otherwise with evidence. An express suggestion to substitute one equivalent component or process for another is not necessary to render

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such substitution obvious. In re Fout, 675 F.2d 297, 213 USPQ 532 (CCPA 1982).

Avoidance of air or oxygen in the system for beer manufacturer is art-recognized – see Daud, US 4,844,932, column 9 lines 53-55 – nitrogen used instead of air to prevent any possible oxidation of wort.

As stated before, the rest of the claims recite optimizable variables. Discovery of an optimum value of a result effective variable in a known process is ordinarily within the skill of the art. In re Boesch and Slaney, 205 USPQ 215 (CCPA 1980); In re Antonie, 559 F.2d 618, 195 USPQ 6 (CCPA 1977); “[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation.” In re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

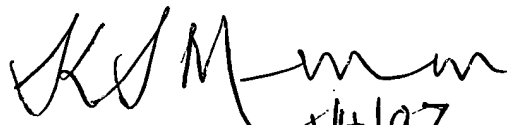
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Krishnan S. Menon whose telephone number is 571-272-1143. The examiner can normally be reached on 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Wanda L. Walker can be reached on 571-272-1151. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Krishnan S Menon
Primary Examiner
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1/4/07